What is claimed is:

1. A communication device for a cable communications network, the communication device comprising:

a first integrated circuit (IC) including one or more receivers and a first media access control (MAC) function; and

a second IC including one or more transmitters and a second MAC function, wherein the first and second IC's are coupleable to a communications network for controlling the downstream and upstream communications, respectively.

2. The communication device according to Claim 1, further comprising:

an analog to digital (A/D) converter coupled to an input of the first IC; and

an up converter coupled to an output of the second IC.

3. The communication device according to Claim 2, further comprising:

an L2/L3 switch coupled to the first and second IC's;

a fiber connection coupled to the L2/L3 switch; and

a central processing unit (CPU) coupled to the L2/L3 switch, wherein data packets may be transferred from the L2/L3 switch to either the first IC or second IC without going through the CPU.

4. The communication device according to Claim 3, wherein the CPU is adapted to download a table containing instructions for routing the data packets.

5. The communication device according to Claim 1, further comprising:

a central processing unit (CPU) coupled to the first and second IC's; and

a fiber connection coupled to the CPU.

6. The communication device according to Claim 5 wherein the CPU is remote from the communication device.

7. The communication device according to Claim 1 wherein the first MAC function function is adapted to handle defragmentation, deconcatenation, suppress packet payload headers, and perform reverse payload header suppression.

8. The communication device according to Claim 7 wherein the second MAC function is adapted to encrypt packets, handle payload header suppression, and put Ethernet packets inside an MPEG frame.

9. The communication device according to Claim 8 wherein a few of the first and second MAC functions are the same.

10. The communication device according to Claim 1 wherein the device is part of a fiber node, a headend, a secondary hub, or a primary hub of a cable network.

11. A communication device comprising:

a fiber interface;

an L2/L3 switch coupled to the fiber interface;

a central processing unit (CPU) coupled to the L2/L3 switch;

one or more transmitters coupled to the L2/L3 switch; and

one or more receivers coupled to the L2/L3 switch.

12. The communication device according to Claim 11 wherein data packets received at the fiber interface are provided to the transmitters without being read by the CPU.

13. The communication device according to Claim 11 wherein data packets received at the fiber interface are provided to the receivers without being read by the CPU.

14. The communication device according to Claim 11 wherein the CPU is remote from the communication device.

15. The communication device according to Claim 11 wherein the CPU is adapted to download a table containing instructions for routing the data packets.

16. The communication device according to Claim 11 further comprising:

a first media access control (MAC) function coupled to the receiver, the first MAC function adapted to handle defragmentation, deconcatenation, suppress packet payload headers, and perform reverse payload header suppression; and

a second MAC function coupled to the transmitter, the second MAC function adapted to encrypt packets, handle payload header suppression, and put Ethernet packets inside an MPEG frame.

17. A data transmission device for a cable network, comprising:

first means for receiving data signals and controlling the receipt thereof with a first media access control (MAC) function; and

second means for transmitting data signals and controlling the receipt thereof with a second MAC function, wherein the data transmission device is coupleable to a communications network for controlling the downstream and upstream communications with the first means and second means, respectively.

18. The communication device according to Claim 17 wherein the first MAC function is adapted to handle defragmentation, deconcatenation, suppress packet payload headers, and perform reverse payload header suppression, and wherein the second MAC function is adapted to encrypt packets, handle payload header suppression, and put Ethernet packets inside an MPEG frame.

19. The communication device according to Claim 18 wherein a few of the first and second MAC functions are the same.

20. A method of controlling the receipt and transmission of data in a communications network, comprising:

receiving data signals and controlling the receipt thereof with a first media access control (MAC) function; and

transmitting data signals and controlling the receipt thereof with a second MAC function, wherein the first and second MAC functions reside in two separate integrated circuits (ICs).

21. The method according to Claim 20 wherein the receiving and controlling is of downstream communications.

22. The method according to Claim 20 wherein the transmitting and controlling is of upstream communications.

23. The method according to Claim 20 wherein the method is accomplished by a fiber node, headend, primary hub or secondary hub of a cable network.

24. The method according to Claim 23 wherein the communications network includes an L2/L3 switch and a central processing unit (CPU) coupled to the first and second MAC functions, wherein data packets may be transferred from the L2/L3 switch to either the first MAC function or second MAC function without going through the CPU.

25. The method according to Claim 24 further comprising:

downloading a table containing instructions for routing the data packets.

26. The method according to Claim 20 further comprising the first MAC function handling defragmentation, deconcatenation, packet payload header suppression, and reverse payload header suppression of data packets, and further comprising the second MAC function handling encryption and payload header suppression of data packets, and placing Ethernet packets inside an MPEG frame.